MIAMIBEACH

OFFICE OF THE CITY MANAGER

NO. LTC # **213-2016**

LETTER TO COMMISSION

TO: Mayor Philip Levine and Members of the City Commission

FROM: Jimmy L. Morales, City Manager

DATE: May 17, 2016

SUBJECT: Water Quality Update

The purpose of this Letter to Commission is to provide an update on the City's efforts to preserve the quality of our waterways.

Stormwater, or urban runoff, is the rain water that flows over driveways, lawns, sidewalks, and streets. As this water flows, it picks up litter, sediment, chemicals, fertilizers, and other pollutants before entering the stormwater system. Municipal stormwater systems are comprised of interconnected pipes designed to drain cities of this rain water and minimize flooding. Because rain water carries pollutants, these systems are known point sources of pollutants. In 1972, the Environmental Protection Agency created the National Pollution Discharge Elimination System (NPDES) permit program to control water pollution by regulating point sources, like stormwater outfalls, that discharge pollutants into waters of the United States. While the NPDES permit program allows municipal stormwater systems across the country to discharge stormwater, it requires specific measures be taken to ensure their discharges do not impact human health or the environment.

The City takes the condition of our waterways very seriously. We have a multi-facetted stormwater management program in place to minimize stormwater pollution above and beyond our NPDES permit requirements. The first component of this program focuses on preventing pollutants from entering our stormwater system through public education, daily street sweeping, and other good housekeeping practices. The stormwater system is completely separate from the sanitary sewer in order to avoid cross-contamination. In addition, we have transitioned from septic systems to a public sanitary sewer system and have an on-going Sanitary Sewer Evaluation Survey program to identify and repair sanitary system breaks. While the configuration of our sanitary sewer system makes it unlikely that wastewater will flow out, these initiatives are an additional safeguard against potential wastewater leaks, which could enter our stormwater system or impact our water resources.

The second component of our stormwater management program focuses on trapping debris within the system and removing it from stormwater via Vortex structures and other pollution control structures. Sediment and debris trapped by these structures can harbor bacteria so a third and critical component is regular cleaning and maintenance of the system to remove trapped pollutants. Our goal is to clean the entire system at least once per year and the Vortex structures at least quarterly to remove pollutants and reduce the potential for bacteria within the system. To this end, we purchased a new $400,000 vacuum truck and hired three new stormwater personnel in the last year.

The fourth and final component of our stormwater management program is water quality monitoring in Biscayne Bay, which Miami-Dade County conducts monthly on our behalf and

reports annually to the Florida Department of Environmental Protection. Based on last year's annual report, stormwater pollutant loadings for the area of Biscayne Bay that corresponds to our community were in compliance with their respective criteria. We are currently working to enhance the County's sampling program to include six new monitoring stations within our waterways and the areas of Biscayne Bay immediately adjacent to our islands. The expanded program is the first of its kind in the County and will allow us to establish water quality baselines for previously unstudied areas. We will continue to use the physical, chemical, and biological data collected from the existing and forthcoming sampling points to tailor our stormwater management program for maximum pollutant reduction.

It is important to recognize that the City's stormwater system is discharging urban runoff in Biscayne Bay in the same way other municipal stormwater systems operate throughout the United States. The use of pumps to move the water, instead of relying on gravity (which does not work as the tides rise), should not add any contaminants or organic material to the water. We understand that by its nature stormwater carries pollutants. However, through our comprehensive stormwater management program and the pollution control structures we are adding as part of our stormwater infrastructure upgrades, we are making sure our discharges today are actually cleaner than they have been in the past. These enhancements improve and preserve the health of our waterways so they can continue to provide habitat, recreational opportunities for our residents and visitors, and a great quality of life.

In summary:

- We are modernizing our stormwater system to address climate change and sea level rise, while reducing pollution from urban runoff.
- The health of the bay is all of our responsibility; therefore, we have a strong education and outreach program to promote best management practices in the community in addition to our good housekeeping efforts.
- The upgraded stormwater infrastructure, including our pump stations, is better equipped to trap debris and pollutants.
- We have a robust water quality monitoring program that currently collects and analyzes monthly samples and which we are looking to enhance with additional sampling locations.
- We are proud environmental stewards of our beaches and our bay.

If you have any questions, please feel free to call me.

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